CITY OF WEST LAFAYETTE

Green Meadows Lift Station and Force Main

**Contract Change Order No. 1 - FINAL**

This Change Order No. 1 provides for modifications to the Contract dated February 5, 2008 between the City of West Lafayette and Infrastructure Systems, Inc. This final change order will result in a net change in Contract Price of **-$72,861.62** as summarized below:

**Contract Changes**

Item No. 1: Adjustment of unit price contract items based upon the final installed quantities.

| Contract Item Description | Bid Qty | | Installed Qty | | Unit Price | Contract Adjustment |
|---|---|---|---|---|---|---|
| No. 1 – Lift Station | 1 | LS | 1 | LS | $780,150 | $0 |
| No. 2 – 12" Force Main | 3,842 | LF | 3,815 | LF | $38 | -$1,026 |
| No. 3 – 12" Force Main Railroad Crossing | 158 | LF | 170 | EA | $190 | $2,280 |
| No. 4 – Work Allowance | 1 | LS | 0 | LS | $20,000 | -$20,000 |
| | | | | | Total Credit | -$18,746 |

Deduct: **($18,746.00)**

Item No. 2: Contractor provided a credit for the material cost difference between the specified and actual air release valve installed. Due to height limitations, a shorter body valve was needed to fit inside the precast manhole.

Deduct: **($717.15)**

Item No. 3: This work includes purchase and delivery of ten crab apple trees as restitution for plantings damaged by pipeline construction.

Cost: **$1,496.21**

Item No. 4: This includes the additional work to install a 12" plug valve and valve box to isolate the force main to enhance maintenance of lift station flow meter.

Cost: **$4,451.21**

Item No. 5: This includes the additional work to provide a new 6-inch thick reinforced concrete access drive in lieu of the existing 4-inch thick unreinforced concrete drive. Additionally, a gravel access road was also constructed to improve access to the existing sanitary sewer line north of the lift station.

Cost: **$15,654.11**

Changes are hereby made to the Contract Price as follows:

| Item | Description | Decrease | Increase |
|---|---|---|---|
| No. 1 | Adjustment for final quantities | ($18,746.00) | |
| No. 2 | Air Release Valve Substitution | ($ 717.15) | |
| No. 3 | Additional Site Restoration | | $ 1,496.21 |
| No. 4 | Valve & Valve Box | | $ 4,451.21 |
| No. 5 | Access Drive Upgrade | | $15,654.11 |
| | Subtotal | ($19,463.15) | $21,601.53 |
| | **Total Increase** | | **$ 2,138.38** |

**Liquidated Damages**

The original Contract substantial completion date was October 3, 2008. Contractor's actual substantial completion date was on April 9, 2009 or 188 days beyond the original Contract substantial completion date. The Construction Agreement between the City of West Lafayette and Infrastructure Systems, Inc. stipulates that liquidated damages for delay be assessed at one thousand dollars ($1,000) for each calendar day that expires beyond the substantial completion date. The City of West Lafayette and Infrastructure Systems, Inc. reached a mutual agreement that liquidated damages be assessed at $75,000.

Deduct: **($75,000.00)**

## Change Order Summary

| | |
|---|---|
| Original Contract Price | $976,166.00 |
| | |
| Contract Changes | +$2,138.38 |
| | |
| Liquidated Damages | -$75,000.00 |
| | |
| Final Total Contract Price | **$903,304.38** |
| | |
| Original Substantial Completion | October 3, 2008 |
| | |
| Actual Substantial Completion | April 9, 2009 |
| | |

**Prepared By:**
Joseph M. Teusch, Project Manager
Greeley and Hansen

Joseph M. Teusch 12/29/09
Signature Date

**Accepted By:**
Jonathan R. Stalker, Project Manager
Infrastructure Systems, Inc.

01/06/10
Signature Date

**Recommended By:**
David S. Henderson, Utility Director
City of West Lafayette

1/21/2010
Signature Date

**Authorized By:**
John R. Dennis, Mayor
City of West Lafayette

Signature Date

**Authorized By:**
Bradley W. Marley, Member
Board of Public Works & Safety

Signature Date

**Authorized By:**
Sana G. Booker, Member
Board of Public Works & Safety

Signature Date

**Attest:**
Judith C. Rhodes, IAMC/CMC/CPFA
City of West Lafayette Clerk-Treasurer

Signature Date

**Green Meadows Lift Station and Force Main**

**Contract Change Order No. 1 - FINAL**

APPROVED:

DATE: _____

CITY OF WEST LAFAYETTE
BOARD OF PUBLIC WORKS AND SAFETY

_____
John R. Dennis, Mayor

_____
Sana G. Booker, Member

_____
Bradley W. Marley, Member

_____
Jonathan C. Speaker, Member

_____
Elizabeth M. Stull, Member

Attest:

_____
Clerk-Treasurer Judith C. Rhodes

Item No. 2

File: 07916-16.150



**Teusch, Joseph**

**From:** David S. Henderson [dhenderson@westlafayette.in.gov]
**Sent:** Wednesday, April 23, 2008 1:59 PM
**To:** Teusch, Joseph
**Subject:** RE: Green Meadows LS

Joe,

I agree. Let's proceed with the Val-Matic.

Thanks for your help.
Dave

David S. Henderson
Utility Director
City of West Lafayette IN. WWTU
Email: dhenderson@westlafayette.in.gov
Phone: 765-775-5145
Fax:765-775-5149

Working to keep West Lafayette a great community.

Please consider the environment before printing my e-mail



**From:** Teusch, Joseph [mailto:jteusch@greeley-hansen.com]
**Sent:** Wednesday, April 23, 2008 1:22 PM
**To:** dhenderson@westlafayette.in.gov
**Cc:** vvanallen@westlafayette.in.gov
**Subject:** FW: Green Meadows LS

Dave,

See response below from Mr. Downey's secretary. In my opinion, I would choose the Val-Matic valve. Let me know if you agree.

Thanks.

Joe

Joseph Teusch, P.E.
**Greeley and Hansen**
6640 Intech Boulevard, Suite 180
Indianapolis, Indiana 46278
P: (317) 924-3380
F: (317) 925-3811

**From:** David Downey [mailto:ddowney@westlafayette.in.gov]
**Sent:** Wednesday, April 23, 2008 12:42 PM
**To:** Teusch, Joseph
**Subject:** RE: Green Meadows LS

Joe:

David does not want to raise the manhole so pick the best shorter valve; we have to keep the neighbors happy.

Donna

**From:** Teusch, Joseph [mailto:jteusch@greeley-hansen.com]
**Sent:** Wednesday, April 23, 2008 12:04 PM
**To:** ddowney@city.west-lafayette.in.us
**Cc:** dhenderson@westlafayette.in.gov; vvanallen@westlafayette.in.gov; Short, TJ
**Subject:** Green Meadows LS

David:

As you are aware, the air release valve structure was placed closer to Gala Drive to address complaints from homeowners. The change in structure location combined with the higher elevation of the force main at this new location has created a challenge. It appears that the specified air release valve will not fit inside the manhole (valve is too tall). There are a couple of options to consider:

Option 1. Contractor could raise the manhole elevation by adding a short barrel section and mounding dirt around the structure. This would allow us to use the specified valve but it may not be aesthetically pleasing.

Option 2. Use a shorter-bodied air release valve. Two options are attached for your review:

| Manufacturer<br>Cost | Valve Body Material | Inner-Metal Materials | Valve Height |
|---|---|---|---|
| A.R.I.<br>$2,978<br>(specified manuf.) | Stainless Steel | 316 Stainless Steel | 25" |
| *Alternative - 1*<br>Golden-Anderson<br>$689<br>(since 1956) | Cast Iron | 304 stainless steel | 9-3/8" |
| *Alternative - 2*<br>Val-Matic<br>$1,219<br>(since 1966) | Cast Iron | 316 stainless steel | 14-15/16" |

**Cost Summary**

If the City decides to go with Option 2 (a shorter valve) then the specified unit could be returned to the supplier and the City would receive a credit of $1,936 (this includes a 35% restocking fee). Note this credit does exceed the cost of either valve alternative. The Val-Matic valve has inner metal parts constructed of type 316 stainless steel which is consistent with the specified valve. We did not find a shorter body valve manufactured by ARI that would work for this application.

Please let me know how the City would like to proceed.

## Teusch, Joseph

**From:** scott wallace [scottw@infrastructuresystems.com]
**Sent:** Wednesday, April 23, 2008 8:43 AM
**To:** Teusch, Joseph
**Subject:** West Lafayette - Air Release Valve
**Attachments:** Air Release Valve.pdf

Joe,

Utility Pipe Sales does have two air release valves that would fit at West Lafayette Green Meadows.

**Material Cost:**

1. Kinetic Compact Combination Air Valve with 2" NPT inlet and outlet is $688.90
2. Val Matic Combination Air Valve with 2" inlet and 1" outlet is $1,218.82

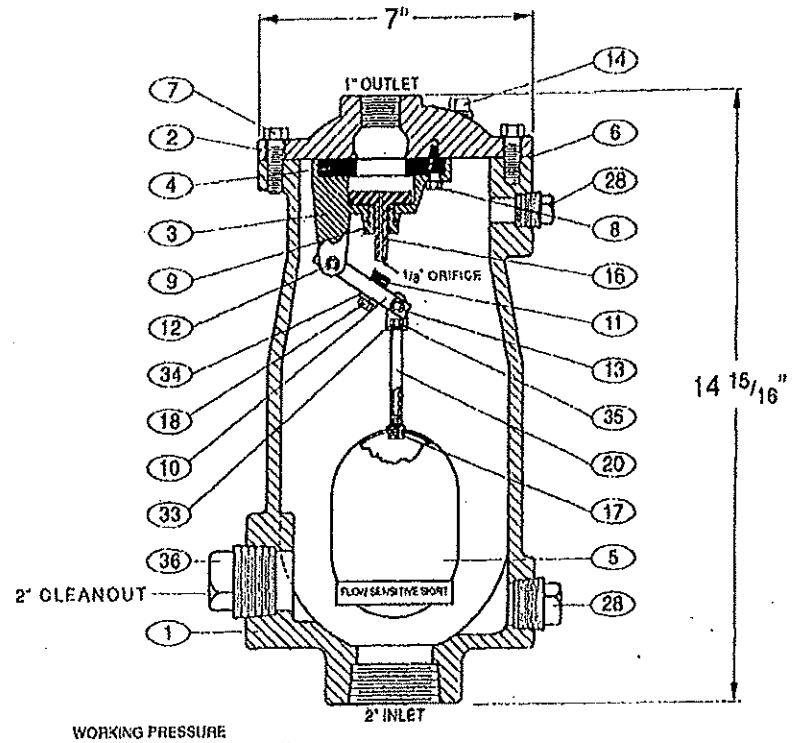
The deduct for the air release valve we have onsite is $1,935.97. This price does include the 35% restocking fee. I have included the cut sheet for each air release valve please let me know how the City would like to proceed.

Thanks,

Scott Wallace
Project Manager
Infrastructure Systems, Inc.
Phone: (812) 865-3309
Fax: (812) 865-3009

Result would be a credit to the City

Existing Valve = $ 1,935.97
Proposed Valve = $ 1,218.82
$ 717.15




WORKING PRESSURE
150 P.S.I. COLD WORKING PRESSURE-C.W.P.

TEST PRESSURE
1.5 TIMES COLD WORKING PRESSURE-C.W.P.

1. BODY
2. COVER
3. BAFFLE
4. SEAT
5. FLOAT
6. GASKET
7. COVER BOLT
8. RETAINING SCREW
9. BUSHING
10. FLOAT ARM
11. ORIFICE BUTTON
12. PIVOT PIN
13. RETAINING RING
14. PIPE PLUG
16. PLUG
17. FLOAT RETAINER
18. LOCK NUT
20. GUIDE SHAFT
28. PIPE PLUG
33. CLEVIS
34. LOCK WASHER
35. GUIDE SHAFT RETAINER
36 PIPE PLUG

SEE DRAWING NO. VM-801A-M FOR STANDARD MATERIALS OF CONSTRUCTION.

| WASTEWATER COMBINATION AIR VALVE | DATE 3-17-00 |
|---|---|
| VAL-MATIC VALVE AND MANUFACTURING CORP. | DWG NO. VM-801A |

# WASTEWATER COMBINATION AIR VALVE

## SERIES NO. 801A

### STANDARD MATERIALS OF CONSTRUCTION

| PART NO. | PART NAME | MATERIAL |
|---|---|---|
| 1 | BODY | CAST IRON ASTM A126, CLASS B |
| 2 | COVER | CAST IRON ASTM A126, CLASS B |
| 3 | BAFFLE (1"-2")<br>BAFFLE (3"-4") | CAST IRON ASTM A126, CLASS B<br>DUCTILE IRON ASTM A536, GRADE 65-45-12 |
| 4 | SEAT | BUNA-N |
| 5 | FLOAT | STAINLESS STEEL T316, ASTM A240 |
| 6 | GASKET | COMPRESSED NON-ASBESTOS FIBER |
| 7 | COVER BOLT | ALLOY STEEL, SAE, GRADE 5 |
| 8 | RETAINING SCREW | STAINLESS STEEL T316, ASTM F593 |
| 9 | GUIDE BUSHING | STAINLESS STEEL T316, ASTM A582 |
| 10 | FLOAT ARM | STAINLESS STEEL T316, ASTM A582 |
| 11 | ORIFICE BUTTON | STAINLESS STEEL & BUNA-N |
| 12 | PIVOT PIN | STAINLESS STEEL T316, ASTM A276 |
| 13 | RETAINING RING | STAINLESS STEEL PH 15-7 MO |
| 14 | PIPE PLUG | STEEL |
| 16 | PLUG | STAINLESS STEEL T316, ASTM A276 |
| 17 | FLOAT RETAINER | STAINLESS STEEL T316, ASTM F880 |
| 18 | LOCK NUT | STAINLESS STEEL T316, ASTM A594 |
| 20 | GUIDE SHAFT | STAINLESS STEEL T316, ASTM A582 |
| 28 | PIPE PLUG | STEEL |
| 33 | CLEVIS | STAINLESS STEEL T316, ASTM A240 |
| 34 | LOCK WASHER | STAINLESS STEEL T316, ASTM A240 |
| 35 | GUIDE SHAFT RETAINER | STAINLESS STEEL T316, ASTM A593 |
| 36 | PIPE PLUG | STEEL |

NOTE: ALL SPECIFICATIONS AS LAST REVISED.

Revised 8-12-03

| MATERIALS OF CONSTRUCTION | DATE 3/17/00 |
|---|---|
| VAL-MATIC® VALVE AND MANUFACTURING CORP. | DRWG NO. VM-801A-M |

# KINETIC COMPACT COMBINATION AIR VALVE

## 2" NPT Inlet and Outlet

FIG. 945

### COMBINETIC

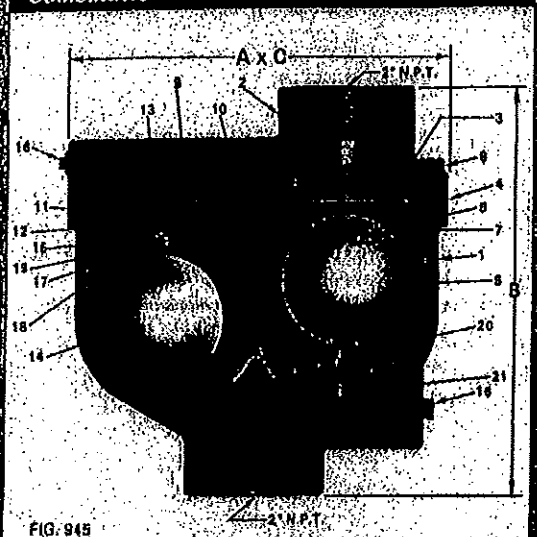



FIG. 945

### GENERAL DIMENSIONS

| VALVE SIZE | A inches | B inches | C inches | WEIGHT (lbs.) |
|---|---|---|---|---|
| 2" | 9" | 9 7/8" | 4 7/8" | 30 |

### ENGINEERING SPECIFICATION

The Combination Air Valve shall consist of a KINETIC Air & Vacuum Valve and an Air Release Valve contained in a single body housing. The valve shall be designed to exhaust large amounts of air during filling, to release small amounts of accumulated air during operation and to admit large amounts of air upon impending vacuum during draining.

The inlet shall be the nominal size of the valve and the outlet shall be the same size as the inlet. Body and cover shall be of cast iron conforming ASTM A126, Class B. The Air & Vacuum portion of the valve shall be designed to exhaust air at up to sonic velocity without blowing shut. The floats shall be spherical and shall be capable of withstanding a test pressure of 1000 psi. The Air Release portion shall have a stainless steel leverage mechanism and float. The small orifice shall be stainless steel and have a rubber seat.

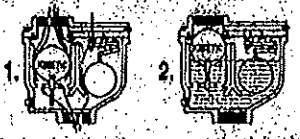
Kinetic Compact Combination Air Valves shall be as manufactured by GA Industries, Inc., Mars, PA, their Figure 945.

### PARTS LIST

1. BODY - Cast Iron, A126 Class B
2. COVER - Cast Iron, A126 Class B
3. SEAT - Buna-N
4. COVER GASKET - Composition
5. FLOAT BALL (Air Vacuum) - 304 Stainless Steel
6. SEAT FOLLOWER - 304 Stainless Steel
7. SEAT SCREWS - 18-8 Stainless Steel
8. COVER BOLTS - Steel Grade 5
9. ORIFICE - 303 Stainless Steel
10. ORIFICE BUTTON - Buna-N
11. LEVERAGE BRACKET - 302/304 Stainless Steel
12. FLOAT ARM - 302/304 Stainless Steel
13. LOCATING SCREW - 18-8 Stainless Steel
14. FLOAT BALL (Air Release) - 304 Stainless Steel
15. PIVOT LINK - 302/304 Stainless Steel
16. PIPE PLUG - Steel (Commercial)
17. FLOAT SCREW 18-8 Stainless Steel
18. LOCKWASHER - 18-8 Stainless Steel
19. COILED SPRING PIN - 302 Stainless Steel
20. CUSHION - Buna-N
21. BALL GUIDE - UHMW-PE

### ENGINEERING DATA

*Kinetic Operating Principle of the Combinetic Valve:*




1. During the exhausting sequence, the air flowing around the large orifice Buoy ball produces a resultant downward force which maintains the ball in the open position.
2. The buoyant force of the balls will seal both orifices when water reaches the balls.

*Pressure Rating:*
NPT Inlet Body rated to 300 psi WOG; tested to 450 psi.
Floats tested to 1000 psi.

*Working Pressure:*
10-150 psi with 1/8" orifice (Standard-Fig. 945)
10-300 psi with 3/32" orifice (Optional-Fig. 945H)
Consult factory if operating pressure is less than 10 psi.

*Small Orifice (Air Release) Maximum Venting Rate:*
Fig.945
@ 150 psi with 1/8" orifice = 28.1 SCFM
Fig.945-H
@ 300 psi with 3/32" orifice = 28 SCFM
For Sizing and Locating see pages 16-17, 36-37.

*Connections:*
Inlet - NPT, Standard. CL.125 or 250 FLG Optional
Outlet - NPT, Standard. CL.125 FLG Optional

*Options:*
For Optional Outlet Cowl specify 945-C.
For Optional Throttling Device specify 945-P, see pages 41 and 35.
For Optional CL.125 FLG Outlet specify 945-J.

COMBINATION AIR VALVES

A Product Of GA Industries

Item No. 3

**Bennett's Nursery, Lafayette, IN - Tree Restoration**

| **MATERIALS & EXPENSES** | | |
|---|---|---|
| Ten (10) 1" Crab Apple Trees | 10 EA | $1,150.52 |
| Sales Tax | 1 LS | $ 80.54 |
| Delivery | 1 LS | $ 70.00 |
| | | $1,301.06 |
| | ISI OVERHEAD & PROFIT | $ 195.16 |
| | **TOTAL:** | **$1,496.21** |

Item No.4

File: 07916-16.150

## Teusch, Joseph

**From:** Teusch, Joseph
**Sent:** Friday, October 03, 2008 3:00 PM
**To:** scottw@infrastructuresystems.com
**Cc:** Short, TJ; mark@blanderson.com
**Subject:** FW: Green Meadows Project - Isolation Valve Change Order

Scott:

Please proceed with the purchase of a 12" plug valve and valve box for the not-to-exceed price of $4,451.21.

Thanks.

Joe

Joseph Teusch, P.E.
**Greeley and Hansen**
6640 Intech Boulevard, Suite 180
Indianapolis, Indiana 46278
P: (317) 924-3380
F: (317) 925-3811

**From:** David Henderson [mailto:dhenderson@westlafayette.in.gov]
**Sent:** Friday, October 03, 2008 12:31 PM
**To:** Teusch, Joseph
**Subject:** Re: Green Meadows Project - Isolation Valve Change Order

Joe,

Sounds good with Option #2.

Thanks,
Dave

David S. Henderson
Utility Director
City of West Lafayette IN. WWTU
Email: dhenderson@westlafayette.in.gov
Phone: 765-775-5145
Fax:765-775-5149

Working to keep West Lafayette a great community.

Please consider the environment before printing my e-mail

On 10/3/08 12:19 PM, "Teusch, Joseph" <jteusch@greeley-hansen.com> wrote:

Dave,

ISI sent two proposals for the force main isolation valve:

Option #1 - 12" plug valve and valve vault = $11,430.83
Option #2 - 12" plug valve and valve box = $ 4,451.21

Option #1 allows better access to the valve by placing it in a vault and option #2 is to bury the valve and provide a valve box with extension stem for operation. As you know, buried valves w/ valve boxes are used on water and wastewater systems all over the world. Given the limited 'potential' use of this valve (and its relatively shallow depth of bury) we recommend that the WWTU proceed with option #2.

Please advise if you wish to proceed with this change and confirm the option.

Thanks.

Joe

Joseph Teusch, P.E.
**Greeley and Hansen**
6640 Intech Boulevard, Suite 180
Indianapolis, Indiana 46278
P: (317) 924-3380
F: (317) 925-3811

**From:** David Henderson [mailto:dhenderson@westlafayette.in.gov]
**Sent:** Friday, September 05, 2008 3:44 PM
**To:** Teusch, Joseph
**Subject:** Re: Green Meadows Project - Isolation Valve
**Importance:** High

Joe,

We definitely want the isolation valve.

My maintenance staff will be forever grateful.

Thanks,
Dave

## 12" Plug Valve

**MATERIALS & EXPENSES**

| | | | |
|---|---|---|---|
| Plug Valve | 1 EA | 2,516.00 | 2,516.00 |
| Valve Box | 1 EA | 72.00 | 72.00 |
| Granular | 1 TN | 13.25 | 13.25 |
| Misc Materials/Piping | 1 EA | 175.00 | 175.00 |

**TOTAL MATERIAL & EXPENSES** **$2,776.25**

**HOURLY LABOR RATES**

| | HR. RATE | FRINGES | BURDEN | TOTAL |
|---|---|---|---|---|
| SUPERINTENDENT/OPERATOR | 26.68 | 12.10 | 13.57 | 52.35 |
| OPERATOR | 25.68 | 12.10 | 13.22 | 51.00 |
| LABORER | 21.27 | 9.03 | 10.61 | 40.91 |
| | | | TOTAL HOURLY RATE | $ 144.26 |

**DAILY LABOR RATES - BASED ON 10 HOURS ( 2 HOURS OVERTIME)**

| | | | |
|---|---|---|---|
| SUPERINTENDENT/OPERATOR | 52.35 | | 575.85 |
| OPERATOR | 51.00 | | 561.00 |
| LABORER | 40.91 | | 450.01 |
| | | **TOTAL DAILY RATE** | **1,586.86** |

| DAILY RATE | # OF DAYS | TOTAL LABOR |
|---|---|---|
| 1,586.86 | 0.25 | 396.72 |

| HOURLY EQUIPMENT RATES | | HOURS | TOTAL |
|---|---|---|---|
| 330 CAT EXCAVATOR | 212.00 | 10.00 | 2,120.00 |
| CASE 580 BACKHOE | 30.50 | 10.00 | 305.00 |
| WORK TRUCK | 13.13 | 10.00 | 131.30 |
| PICKUP TRUCK | 13.13 | 10.00 | 131.30 |
| 2" SUBMERSIBLE PUMP | 2.30 | 10.00 | 23.00 |
| STORAGE CONTAINER | 2.00 | 10.00 | 20.00 |
| MISC HAND TOOLS | 6.00 | 10.00 | 60.00 |
| | | TOTAL DAILY RATE | $2,790.60 |

| DAILY RATE | # OF DAYS | TOTAL EQUIPMENT |
|---|---|---|
| 2,790.60 | 0.25 | 697.65 |

| | | |
|---|---|---|
| TOTAL MATERIALS & EXPENSES | | $ 2,776.25 |
| TOTAL LABOR | | $ 396.72 |
| TOTAL EQUIPMENT | | $ 697.65 |
| | SUBTOTAL | $ 3,870.62 |
| | OVERHEAD & PROFIT | $ 580.59 |
| | **TOTAL:** | **$ 4,451.21** |

Item No. 5

**Teusch, Joseph**

**From:** Jon Stalker [isi2@blueriver.net]
**Sent:** Monday, July 20, 2009 4:57 PM
**To:** Teusch, Joseph
**Subject:** Green Meadows Concrete/Gravel Drive
**Attachments:** Concrete Drive revised 7-20-09.xls

Joe,

Attached is the revised breakdown for the changes in the concrete/gravel drive. I believe the net is a $15, 654.11 adder if you agree with all my calculations. Please let me know if you have any questions or need additional information.

Jonathan R. Stalker
Project Manager
Infrastructure Systems, Inc.

Summary

| | | |
|---|---|---|
| NEW 6" Drive - Adder | = | $ 21,962.69 |
| Additional Subgrade | = | $ 1,212.33 |
| Additional Gravel Access | = | $ 1,669.00 |
| EX. 4" Drive - Credit | = | -$ 9,189.91 |
| | | $15,654.11 |

## 6" Concrete Drive

**MATERIALS & EXPENSES**

| | | | |
|---|---|---|---|
| Concrete | 40 CY | 86.50 | 3,460.00 |
| Granular #2 | 80 TN | 15.50 | 1,240.00 |
| Granular #53 | 55 TN | 13.50 | 742.50 |
| Reinforcing Steel | 1 LS | 787.00 | 787.00 |
| Misc Materials | 1 LS | 150.00 | 150.00 |
| Misc Form Materials | 1 LS | 200.00 | 200.00 |

| | |
|---|---|
| **TOTAL MATERIAL & EXPENSES** | **$ 6,579.50** |

**HOURLY LABOR RATES**

| | HR. RATE | FRINGES | BURDEN | TOTAL |
|---|---|---|---|---|
| OPERATOR | 25.68 | 12.10 | 13.22 | 51.00 |
| LABORER | 21.27 | 9.03 | 10.61 | 40.91 |
| LABORER | 21.27 | 9.03 | 10.61 | 40.91 |
| | | | TOTAL HOURLY RATE | $ 132.81 |

**DAILY LABOR RATES - BASED ON 10 HOURS ( 2 HOURS OVERTIME)**

| | | |
|---|---|---|
| OPERATOR | 51.00 | 561.00 |
| LABORER | 40.91 | 450.01 |
| LABORER | 40.91 | 450.01 |
| | **TOTAL DAILY RATE** | **1,461.02** |

| DAILY RATE | # OF DAYS | TOTAL LABOR |
|---|---|---|
| 1,461.02 | 5.50 | **8,035.61** |

**DAILY EQUIPMENT RATES**

| | TOTAL |
|---|---|
| CASE 580 BACKHOE | 433.07 |
| WORK TRUCK | 131.00 |
| PICKUP TRUCK | 131.00 |
| CARGO TRAILER | 60.00 |
| MISC HAND TOOLS | 60.00 |
| **TOTAL DAILY RATE** | **$ 815.07** |

| DAILY RATE | # OF DAYS | TOTAL EQUIPMENT |
|---|---|---|
| 815.07 | 5.50 | **4,482.89** |

| | | |
|---|---|---|
| TOTAL MATERIALS & EXPENSES | | $ 6,579.50 |
| TOTAL LABOR | | $ 8,035.61 |
| TOTAL EQUIPMENT | | $ 4,482.89 |
| | SUBTOTAL | $ 19,098.00 |
| | OVERHEAD & PROFIT | $ 2,864.70 |
| | **TOTAL:** | **$ 21,962.69** |

## LABOR & EQUIPMENT TO EXCAVATE & PLACE SUBGRADE

**HOURLY LABOR RATES**

| | HR. RATE | FRINGES | BURDEN |
|---|---|---|---|
| OPERATOR | 25.68 | 12.10 | 13.22 |
| | | | TOTAL HOURLY RATE |

**DAILY LABOR RATES - BASED ON 8 HOURS**

| | | | TOTAL |
|---|---|---|---|
| OPERATOR | 51.00 | | 408.00 |
| | | **TOTAL LABOR RATE** | **$ 408.00** |

| **DAILY EQUIPMENT RATES** | **DAYS** | **TOTAL** |
|---|---|---|
| CAT 277 | 1.00 | 404.90 |
| PICKUP TRUCK | 1.00 | 131.30 |
| TRAILER | 1.00 | 50.00 |
| MISC HAND TOOLS | 1.00 | 60.00 |
| | **TOTAL EQUIPMENT RATE** | **$ 646.20** |

| | | |
|---|---|---|
| TOTAL LABOR | | $ 408.00 |
| TOTAL EQUIPMENT | | $ 646.20 |
| | SUBTOTAL | $ 1,054.20 |
| | OVERHEAD & PROFIT | $ 158.13 |
| | **TOTAL:** | **$ 1,212.33** |

## AREA D GRAVEL

**MATERIALS & EXPENSES**

| | | | |
|---|---|---|---|
| Granular #53 | 45 TN | 13.50 | 607.50 |

| | |
|---|---|
| **TOTAL MATERIAL & EXPENSES** | **$ 607.50** |

**HOURLY LABOR RATES**

| | HR. RATE | FRINGES | BURDEN | TOTAL |
|---|---|---|---|---|
| OPERATOR | 25.68 | 12.10 | 13.22 | 51.00 |
| | | | TOTAL HOURLY RATE | $ 51.00 |

**DAILY LABOR RATES - BASED ON 10 HOURS ( 2 HOURS OVERTIME)**

| | | |
|---|---|---|
| OPERATOR | 51.00 | 561.00 |
| | **TOTAL DAILY RATE** | **561.00** |

| DAILY RATE | # OF DAYS | TOTAL LABOR |
|---|---|---|
| 561.00 | 0.75 | **420.75** |

**DAILY EQUIPMENT RATES**

| | TOTAL |
|---|---|
| CASE 580 BACKHOE | 433.07 |
| WORK TRUCK | 131.00 |
| **TOTAL DAILY RATE** | **$ 564.07** |

| DAILY RATE | # OF DAYS | TOTAL EQUIPMENT |
|---|---|---|
| 564.07 | 0.75 | **423.05** |

| | | |
|---|---|---|
| TOTAL MATERIALS & EXPENSES | | $ 607.50 |
| TOTAL LABOR | | $ 420.75 |
| TOTAL EQUIPMENT | | $ 423.05 |
| | SUBTOTAL | $1,451.30 |
| | OVERHEAD & PROFIT | $ 217.70 |
| | **TOTAL:** | **$1,669.00** |

## 4" Concrete Drive

**MATERIALS & EXPENSES**

| | | | |
|---|---|---|---|
| Concrete | 24 CY | 86.50 | 2,076.00 |
| Misc Materials | 1 LS | 125.00 | 125.00 |
| Misc Form Materials | 1 LS | 100.00 | 100.00 |

| | |
|---|---|
| **TOTAL MATERIAL & EXPENSES** | **$2,301.00** |

**HOURLY LABOR RATES**

| | HR. RATE | FRINGES | BURDEN | TOTAL |
|---|---|---|---|---|
| OPERATOR | 25.68 | 12.10 | 13.22 | 51.00 |
| LABORER | 21.27 | 9.03 | 10.61 | 40.91 |
| LABORER | 21.27 | 9.03 | 10.61 | 40.91 |
| | | | TOTAL HOURLY RATE | $ 132.81 |

**DAILY LABOR RATES - BASED ON 10 HOURS ( 2 HOURS OVERTIME)**

| | | |
|---|---|---|
| OPERATOR | 51.00 | 561.00 |
| LABORER | 40.91 | 450.01 |
| LABORER | 40.91 | 450.01 |
| | **TOTAL DAILY RATE** | **1,461.02** |

| DAILY RATE | # OF DAYS | TOTAL LABOR |
|---|---|---|
| 1,461.02 | 2.50 | **3,652.55** |

**DAILY EQUIPMENT RATES**

| | TOTAL |
|---|---|
| CASE 580 BACKHOE | 433.07 |
| WORK TRUCK | 131.00 |
| PICKUP TRUCK | 131.00 |
| CARGO TRAILER | 60.00 |
| MISC HAND TOOLS | 60.00 |
| **TOTAL DAILY RATE** | **$ 815.07** |

| DAILY RATE | # OF DAYS | TOTAL EQUIPMENT |
|---|---|---|
| 815.07 | 2.50 | **2,037.68** |

| | | |
|---|---|---|
| TOTAL MATERIALS & EXPENSES | | $ 2,301.00 |
| TOTAL LABOR | | $ 3,652.55 |
| TOTAL EQUIPMENT | | $ 2,037.68 |
| | SUBTOTAL | $ 7,991.23 |
| | OVERHEAD & PROFIT | $ 1,198.68 |
| | **TOTAL:** | **$ 9,189.91** ← deduct |